



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
07/351,179	05/12/89	HAGENBUCH	L 30093

EXAMINER

DIXON, J

LEYDIG, VOIT & MAYER  
180 NORTH STETSON AVE.  
TWO PRUDENTIAL PLAZA-SUITE 4900  
CHICAGO, IL 60601

ART UNIT PAPER NUMBER

2304

15

DATE MAILED: 04/20/92

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 12/23/92 ☒ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), — days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- ☒ Notice of References Cited by Examiner, PTO-892.
- ☐ Notice re Patent Drawing, PTO-948.
- ☐ Notice of Art Cited by Applicant, PTO-1449.
- ☐ Notice of Informal Patent Application, Form PTO-152.
- ☐ Information on How to Effect Drawing Changes, PTO-1474.
- ☐

Part II SUMMARY OF ACTION

1. ☒ Claims 1-4, 6-15, 18, 20-24, 27-29 and 33-37 are pending in the application.

Of the above, claims — are withdrawn from consideration.

2. ☐ Claims — have been cancelled.

3. ☒ Claims 29 is is are allowed.

4. ☒ Claims 1-4, 6-9, 11, 12, 15, 18, 20-24, 27, 28 and 33-37 are rejected.

5. ☒ Claims 10, 13, and 14 are objected to.

6. ☐ Claims — are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on —. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable. ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on — has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed on —, has been ☐ approved. ☐ disapproved (see explanation).

12. ☐ Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received  
☐ been filed in parent application, serial no. —; filed on —.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

Art Unit 234

1. This application has been carefully reconsidered in view of the amendment filed December 23, 1990.

2. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

3. Claims 1-4, 6-9, 11, 12, 15, 18, 20-24, 27-28 and 33-37 are rejected under 35 U.S.C. § 103 as being unpatentable over (Gamble (508), Miller (084) or Griffiths (GB 2043921)) in view of Juhasz et al (421) and Jurca (263).

4. As per claims 1, 20-24 and 27, Gamble discloses a mechanism for recording the load, mileage and speed of vehicles. The system is a gear driven mechanism for recording the measured load on a strip chart type medium for subsequent use. The distance and speed of the vehicle would also be stored.

5. Miller disclose a vehicle load monitoring system where a plurality of load cells are used to indicate total load after summing. The value of the load is stored and compared to a threshold value for actuation of an overload alarm. A display device is also present for indication to the operator. It would have been readily apparent to skilled artisans that once the load value is stored (temporarily), it may be retained for an extended period if sufficient memory was available. Miller has recognized (col. 1, lines 42+) the damage to vehicles, roads and public safety due to overloading of the vehicle.

6. Griffiths discloses a vehicle load monitor. Plural load sensors are used to detect the actual load on the vehicle. The load values are input to a processor for storage and evaluation. The total load value is output to the operator via a display to ensure that the maximum legal or safe loading is not exceeded. A running total of the payloads for the specific vehicles is also maintained in the memory as an indication of wear on the vehicle.

7. Juhasz et al. disclose a computer-based on-board vehicle monitoring and recording system of engine parameters. Juhasz et

al. is a teaching that many parameters/factors may impact upon the wear of a vehicle and that they should be collectively monitored. The system has a plurality of sensors connected to an on-board recording/monitor for storing (and processing) the measured data. The measured data may then be transmitted via various types of communication links to a remote processing unit for evaluation. When the data is transmitted to the remote location, some identification data (number) would have also been required for subsequent correlation of the data to the proper vehicle. Juhasz et al. is a generic teaching of the monitoring of a plurality of factors/parameters or quantities which may be useful in vehicular analysis and historical storage.

8. Jurca discloses a load handling vehicle monitoring system for a fork lift truck or other load handling vehicle. A plurality of transducers monitor conditions relating to vehicle usage. Combinations of conditions are used relative to modes of operation of the vehicle. The data is accumulated over time and by measuring time to derive a count of the duration of usage of the vehicle in the modes. Jurca is a basic teaching of the desire to accumulate data over time as indication of usage and wear.

9. It would have been obvious to one of ordinary skill in the art to combine the load monitoring teachings of Gamble, Miller or Griffiths with the vehicular monitoring teachings of Juhasz et al

and Jurca since both groups of references pertain to the monitoring, storing and use of data for analysis of the vehicle's use and condition. Juhasz et al. teach the updating of prior load monitoring systems and transmittal of the data to a central or remote location for analysis. The variations in loading would have been indicative of on/off loading events. Also, the type of vehicle would have also impacted upon what data was monitored and what signals were available as indicators. The use of locational, directional or geographical information in a broad sense may have also been useful information for skilled artisans whereas vehicle distribution, routing and scheduling may have also been useful. The transmission of the signal to a remote location could have easily provided location information by triangulating the origin or by input by the operator of the vehicle. It would have been obvious to skilled artisans that numerous quantities along with vehicular load may be monitored at the same time for various reasons depending on the specifics of the vehicle and its use by an operator and/or owner.

10. As per claims 33-37, Gamble and Griffiths both disclose the accumulation of data in historical data base, print-out or total load. Further, the data would from different transducers relating to different quantities would have had to have been correlated together to be useful. Gamble and Griffiths also disclose monitoring the time of the hauls.

11. As per claims 2-4, and 6-9 as above with regards to claims 1, 20-24, 27 and 33-37.

12. As per claims 11-12, the vehicle may have been loaded in any manner wherein the substantial increase in vehicle load would have been indicative of when material was added. The changes in time of the display of Gamble would have been indicative of the time.

13. As per claim 15, Juhasz et al. disclose time tagging of data. The unloading data would be similarly acquired as the loading data by changes in the load.

14. As per claims 18 and 28, as above with regards to claims 1-4, 6-9, 20-24, 27, and 33-37.

REMARKS

15. With regards to the remarks concerning vehicle monitoring and management, the use of the system on heavy-duty vehicles and after-market systems, these aspects or details are not adequately found in the claim language. Jurca has been added to further teach aspects of monitoring.

16. No detail as to the commercial success of the claims has been submitted. If submitted it must be addressed to the claimed invention, not the disclosed invention.

17. With regards to "haul cycle" and "haul" information, applicant appears to read more into these words than there literal meaning.

18. With regards to status detection of the gears, Jurca discloses the monitoring of various statuses of a forklift as motivation to monitor other statuses.

19. Applicant's arguments filed December 23, 1991 have been fully considered but they are not deemed to be persuasive.

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

21. Claim 29 is allowable over the prior art of record.

22. Applicant's amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL.** See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joe Dixon whose telephone number is (703) 308-1667.

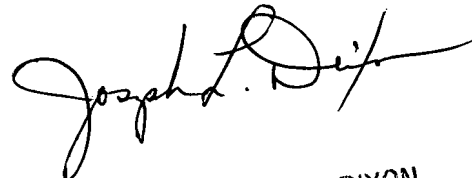
Serial No. 351,179

-8-

Art Unit 234

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0754.

JD/RPH  
March 25, 1992

A handwritten signature in cursive script, appearing to read "Joseph L. Dixon".

JOSEPH L. DIXON  
PRIMARY EXAMINER  
GROUP 230